L	Hits	Search Text	DB	Time stamp
Number 1	61	plug\$4 with (hole via spac\$3 open\$4) and	USPAT;	2004/02/20
		((circuit adj pattern) trace) and ((doctor with blad\$3) squeegee) and (resist dielectric insulat\$3)	EPO; JPO	10:07
2	6	plug\$4 with (hole via spac\$3 open\$4) same ((circuit adj pattern) (conductive adj trace)) same (resist dielectric insulat\$3) and ((doctor with blad\$3)	USPAT; EPO; JPO	2004/02/20 10:10
3	65	squeegee) plug\$4 with (hole via spac\$3 open\$4) same (resist dielectric insulat\$3) and	USPAT; EPO; JPO	2004/02/20 10:21
4	789	((doctor with blad\$3) squeegee) (fill\$3 plug\$4) with (hole via spac\$3 open\$4) same (solder adj resist	USPAT; EPO; JPO	2004/02/20 10:22
5	29	<pre>insulating adj resin) ((fill\$3 plug\$4) with (hole via spac\$3 open\$4) same (solder adj resist insulating adj resin)) and ((doctor with blad\$3) squeegee)</pre>	USPAT; EPO; JPO	2004/02/20 10:38
7	997	29/\$.ccls. and ((doctor with blad\$3) squeegee)	USPAT; EPO; JPO	2004/02/20 10:38
8	48	29/\$.ccls. and ((doctor with blad\$3) squeegee) and (solder adj resist insulating adj resin)	USPAT; EPO; JPO	2004/02/20 12:03
9	44	427/\$.ccls. and ((doctor with blad\$3) squeegee) and (solder adj resist insulating adj resin)	USPAT; EPO; JPO	2004/02/20 12:21
10	0	63318798.URPN.	USPAT	2004/02/20
11	8	427/\$.ccls. and ((doctor with blad\$3) squeegee) and (hole spac\$3 via open\$4) with solder adj resist	USPAT; EPO; JPO	2004/02/20 12:22
12	8	((doctor with blad\$3) squeegee) and (plug\$4 fill\$3) with (hole spac\$3 via open\$4) with solder adj resist	USPAT; EPO; JPO	2004/02/20 12:24
13	24	((doctor with blad\$3) squeegee) same (hole spac\$3 via open\$4) with solder adj	USPAT; EPO; JPO	2004/02/20 12:27
14	618	((doctor with blad\$3) squeegee) same (hole via) with (plug\$4 fill\$3)	USPAT; EPO; JPO	2004/02/20
15	4	((doctor with blad\$3) squeegee) same (hole via) with (plug\$4 fill\$3) with solder adj resist	USPAT; EPO; JPO	2004/02/20 12:29
16	0		USPAT; EPO; JPO	2004/02/20 12:30
17	23	((doctor with blad\$3) squeegee) same (hole via) with (plug\$4 fill\$3) with insulating	USPAT; EPO; JPO	2004/02/20 15:19
18	18	4715117.URPN.	USPAT	2004/02/20
19	. 27	4792646.URPN.	USPAT	2004/02/20
20	37	("3613230" "4017968" "4319708" "4681649" "4704791" "4791248" "4792646" "4967314" "4983252" "5006182" "5028743" "5117069" "5118458" "5146674" "5153986" "5224265" "5243142" "5271150" "5288665" "5346750" "5421083" "5443672" "5450290" "5451722" "5487218" "5557844" "5568682" "5571593" "5662987" "5665650" "5666722" "5685070" "5689091" "5740606" "5745984" "5779836" "5822856").PN.	USPAT	2004/02/20 12:39
34	158	((doctor with blad\$3) squeegee) same (hole via) and (no without) with (mask tencil)	USPAT; EPO; JPO	2004/02/20 15:21
				·

Search History 2/20/04 6:13:36 PM Page 1

35	10	(((doctor with blad\$3) squeegee) same	USPAT;	2004/02/20
		(hole via) and (no without) with (mask	EPO; JPO	15:26
		tencil)) and (fill\$3 plug\$4) with	DIO, 010	13.20
1	_ (insulating		
36	5	(((doctor with blad\$3) squeegee) same	USPAT;	2004/02/20
	j	(hole via) and (no without) with (mask	EPO; JPO	15:28
	1	tencil)) and (fill\$3 plug\$4) with resist		
37	24	(((doctor with blad\$3) squeegee) same	USPAT;	2004/02/20
3 /	24			2004/02/20
		(hole via) and (no without) with (mask	EPO; JPO	15:35
		tencil)) and (fill\$3 plug\$4) with resin		1
38	112	(((doctor with blad\$3) squeegee) same	USPAT;	2004/02/20
		(hole via) and (no without) with (mask	EPO; JPO	16:18
		tencil)) and (fill\$3 plug\$4)	210, 010	10.10
39	١ .			0004/00/00
39	1 +	4728568.pn.	USPAT;	2004/02/20
			EPO; JPO	16:18
40	12	4728568.URPN.	USPAT	2004/02/20
				16:19
41	6	("3758433" "3948701" "4166150"	USPAT	2004/02/20
	1	"4255208" "4448622" "4503098").PN.	OSERI	1
	1	1233200 4440022 "4503098").PN.		16:20
-	4	hole with plug\$4.ti. and Lee.in.	USPAT;	2003/11/17
			EPO; JPO	12:11
-	5	hole with plug\$4.ti. and Lee.in.	USPAT;	2003/11/17
	[US-PGPUB;	12:12
			EPO; JPO	
				0000011111
_	1	circuit adj board.ti. and air adj space	USPAT;	2003/11/17
		and void adj formed	EPO; JPO	12:13
-	14		USPAT	2003/12/03
		"5284548" "5308929" "5309632"		17:37
		"5690837" "5863447" "6097089"		1,,,,,,
		"6228511" "6242078" "6282782"	1	
			1	
	_	"6323436" "6376158").PN.		
-	7	(, prage, and ((border ad)	USPAT;	2003/12/03
		resist) (insulating adj resin)) and	EPO; JPO	17:47
		squeegee	'	
-	1		USPAT	2003/12/03
	*	MESE ISO. OKIN.	OSPAI	
		/#3.500.00.5# / #00.0.4# / #0.0.4# / #0.0.4#		17:50
-	9	(USPAT	2003/12/03
		"3984244" "4127436" "4230793"		17:50
		"4234626" "4260675" "4344998").PN.		
-	21	4506004.URPN.	USPAT	2003/12/03
				17:51
_	l 8	("3629036" "3824104" "3984244"	USPAT	2003/12/03
	ľ		USPAI	
		"4127436" "4230793" "4234626"	1	17:53
		"4260675" "4344998").PN.	1	
-	19	4804615.URPN.	USPAT	2003/12/03
				17:53
-	22	5729437.URPN.	USPAT	2003/12/03
				17:55
_	14	("4942364" "5446309" "5539241"	HCDAM	
	14		USPAT	2003/12/03
		"5742091" "5844299" "5877533"		17:57
		"5883335" "5898223" "5977845"		
		"6002161" "6108212" "6180995"		
		"6258688" "6287931").PN.		
-	1	6631838.pn.	USPAT;	2003/12/04
	*		1	
	٠		EPO; JPO	17:25
-	49	plug\$4 with hole and squeegee and mask\$3	USPAT;	2003/12/04
			EPO; JPO	17:27
-	49	4964948.URPN.	USPAT	2003/12/04
				17:39
-	8	("3370351" "4521449" "4715117"	USPAT	2003/12/04
	ı	1 '	OSFAI	
		"4817276" "4925723" "4964947"		17:45
		"4964948" "5120384").PN.		
-	11	5274916.URPN.	USPAT	2003/12/04
				17:46
_	43	(solder adj resist insulating adj resin)	USPAT;	2004/02/19
		and (squeegee doctor adj blade) and	EPO; JPO	
			PEO, 150	17:23
		circuit adj pattern and (hole via)		
_	11	("4668532" "4786528" "5382333"	USPAT	2004/02/19
		"5439986" "5652042" "5670250"		12:29
		"5888627" "6060150" "6214455"		
		"6355131" "6524717").PN.		
L	L	1		I

Search History 2/20/04 6:13:36 PM Page 2

-	2	("3948706" "4024629").PN.	USPAT	2004/02/19
-	50	4024629.URPN.	USPAT	2004/02/19
_	1	 RE32430.URPN.	USPAT	14:16 2004/02/19
	_			16:50
-	9	("3629036" "3824104" "3904492" "3984244" "4127436" "4230793" "4234626" "4260675" "4344998").PN.	USPAT	2004/02/19 16:50
-	1	6139904.pn.	USPAT; EPO; JPO	2004/02/19 16:53
-	5	("3158503" "4323593" "4401686" "4529477" "4763403").PN.	USPAT	2004/02/19
_	18	4529477.URPN.	USPAT	2004/02/19
-	18	4529477.URPN.	USPAT	2004/02/19
-	2	("4323593" "4324815").PN.	USPAT	2004/02/19
-	32	4323593.URPN.	USPAT	2004/02/19 17:11
-	5	("4323593" "4964948" "5191709" "5268194" "5822856").PN.	USPAT	2004/02/19 17:12
_	50	4964948.URPN.	USPAT	2004/02/19
-	11	((solder adj resist) (insulating adj resin)) same fill\$3 same (hole via) and	USPAT; EPO; JPO	2004/02/19
		(squeegee (doctor adj blad\$3)) and circuit adj pattern	110, 010	17.20
-	29	((solder with resist) (insulating with resin)) same fill\$3 same (hole via open\$3	USPAT; EPO; JPO	2004/02/19 17:32
		spac\$3) and (squeegee (doctor adj blad\$3)) and circuit adj pattern	210, 020	
-	583	29/846,852.ccls. and fill\$3 with (via hole open\$3 spac\$3)	USPAT; EPO; JPO	2004/02/19 17:36
-	60	(29/846,852.ccls. and fill\$3 with (via hole open\$3 spac\$3)) and solder with	USPAT; EPO; JPO	2004/02/19
_	88	resist 29/846,852.ccls. and fill\$3 and (squeegee	USPAT;	2004/02/19
_	4	(doctor adj blad\$3)) ("4323593" "5277761" "5323701"	EPO; JPO USPAT	17:37 2004/02/19
-	4		USPAT	17:38 2004/02/19
-	7		USPAT	17:40 2004/02/19
		"5407864" "5615477" "5843251" "5848466").PN.		17:44
-	32	4323593.URPN.	USPAT	2004/02/19 18:01
_	9	5120384.URPN.	USPAT	2004/02/19
-	4	("3354542" "4336100" "4732636" "4902551").PN.	USPAT	2004/02/19
-	13	("4090231" "4109377" "4396936" "4919970" "5189261" "5427865"	USPAT	2004/02/19
		"5463191" "5492266" "5561322" "5593080" "5620129" "5759269"		10.03
_	15	"5803340").PN. ("5041183" "5260170" "5286926"	USPAT	2004/02/19
		"5375042" "5378869" "5389742" "5466892" "5473120" "5495665"	OSFAI	18:09
		"5510216" "5576519" "5600103"		
-	7	"5744758" "5876842" "6010769").PN. 5268194.URPN.	USPAT	2004/02/19
-	6	("4145691" "4323593" "4324815"	USPAT	18:12 2004/02/19
-	50	"4664945" "4938994" "5133120").PN. 4024629.URPN.	USPAT	18:12 2004/02/19
-	2	5087413.URPN.	USPAT	18:16 2004/02/19
L	L		1	18:23

_	8	("3852877" "4024629" "4434134" "4599277" "4671928" "4868034" "4954313" "4961879").pN.	USPAT	2004/02/19 18:23
-	16	l · · · · · · · · · · · · · · · · · · ·	USPAT	2004/02/19
-	12	("3226255" "3735730" "4020206" "4023487" "4024629" "4127337" "4323593" "4459320" "4515304" "4529477" "4604966" "4761881").pn.	USPAT	2004/02/19
_	6	("3077511" "4024629" "4249302" "4604160" "4663497" "4792646").PN.	USPAT	2004/02/19
-	11	("2964007" "3516155" "4311267" "4323593" "4626309" "4694138" "4739919" "4774760" "4872261" "4953460" "5129573").PN.	USPAT	2004/02/19 18:37
_	25	5593080.URPN.	USPAT	2004/02/19 18:37

	U	1	Ø	ocument	ID	Issue Date	Pages	Title	Current OR	Curren
9		R	Ì	5304392		19940419	8	Method of manufacturing printed wiring board	427/96	216/12 216/13
10	С	Ø	į	•		19850716	6	Process for the manufacture of printed circuit boards	216/17	216/48 216/50
11		₹ 7				: -	10	Hole filling method for a printed wiring board	29/830	29/831 29/852
12			ì			20010522	17	Paste connection plug, burying method, and	438/618	438/62 438/62
13	С		}			19910212		Method of abrading a hardened resin	51/293	51/298 51/308
14	П		1			20020716		Mounting substrate with a solder resist layer and	438/613	438/61 438/61
15	Г	•	1					Multilayer printed wiring board and its manufacturing	428/209	174/25 174/25
16			A			20030704	4	METHOD OF COATING WITH SOLDER RESIST INK AND AN	1 1 1	
17	П	12.	Α			20000225	4	PRINTED WIRING BOARD AND MANUFACTURE THEREOF	**************************************	•
18	Г	,	ì			19911106	5	MANUFACTURE OF METALLIC PLATE BUILT-IN PRINTED	† • • • • • • • • • • • • • • • • • • •	29/837
19		P	JP	63318798	ВА	19881227	5	FORMATION OF SOLDER RESIST FILM AND DEVICE THEREFOR		427/96
20	Г	Þ	JP A	20002441	116	20000908		RESIN FILLER SQUEEGEE, MANUFACTURE THEREOF, AND		2
21	Γ	Þ	Α			20020607	10	METHOD FOR MANUFACTURING PRINTED WIRING BOARD		-
22	Г	F.		6135024			19	Screen printing method and printing apparatus	101/123	101/12 118/41
23	П	F	បន	4728568	A	19880301		Masking tape for use in manufacturing a printed	428/349	156/15 427/15

	1 400E0494 II James approprie for motel tile halon	700/007	
US 3363666 A	1990/131 Opwald plug plocess for lifetal via index	110/246	
C 060 1064 CO	COSOLIOS F CIDISTEC PINGS FOI SIL RICHARD CONTRACTOR	100/240	10 - 10
US 6372616 B1	20020416 Method of manufacturing an electrical interconnection of a semiconductor device using an erosion protect 38/592	eo438/592	Chao, Ying-Chen et al
US 20020184757 A	20021212 Hole plugging method for printed circuit boards, and hole plugging device	29/852	Whitlow, Graham A. et
US 6631838 B2	20031014 Method for fabricating printed circuit board	228/225	228/225 Yoo, Bong-young et al
US 6282782 B1	20010904 Forming plugs in vias of circuit board layers and subassemblies	29/852	Lee, Sung Gue et al.
US 6376158 B1	20020423 Methods for selectively filling apertures	430/315	430/315 Kim, Nam-Jin et al.
US RE32430 E	19870602 Printed wiring board	430/312	430/312 Biunno, Nicholas et al.
US 6504227 B1	20030107 Passive semiconductor device mounted as daughter chip on active semiconductor device	257/531	257/531 Jones, Gerald Walter e
US 4804615 A	19890214 Method for manufacture of printed circuit boards	430/314	430/314 Sullivan, Donald F.
US 5729437 A	19980317 Electronic part including a thin body of molding resin	361/760	361/760 Matsuo, Mie et al.
US 5665525 A	19970909 Method for producing printed circuit boards	430/315	430/315 Larson, Gary B. et al.
US 5324535 A	19940628 Process of coating printed wiring board with solid solder resist pattern formed from liquid and dry solder r427/76	r r427/76	Hashimoto, Nobuaki
US 6276055 B1	20010821 Method and apparatus for forming plugs in vias of a circuit board layer	29/852	Pienimaa, Seppo
US 6264862 B1	20010724 Method for manufacturing a plug	264/102	264/102 Ishido, Kiminori
US 4964948 A	19901023 Printed circuit board through hole technique	216/18	Bryan, Scott K. et al.
US 5229549 A	19930720 Ceramic circuit board and a method of manufacturing the ceramic circuit board	174/262	174/262 Liaw, Been-Yu
US 6139904 A	20001031 Method of making a printed board	427/97	Reed, Ronald G.
US 5274916 A	19940104 Method of manufacturing ceramic multilayer electronic component	29/848	Yamakawa, Akira et al
US 4715117 A	19871229 Ceramic wiring board and its production	29/851	Yamasaki, Kozo et al.
US 6051093 A	20000418 Mounting method of semiconductor element	156/251	156/251 Kawabata, Shoichi et a
US 6381838 B1	20020507 BGA package and method of manufacturing the same	29/848	Enomoto, Eyo
US 6329610 B1	20011211 Hybrid wiring board, semiconductor apparatus, flexible substrate, and fabrication method of hybrid wiring 174/264	ng 174/264	Tsukahara, Norihito
US 5832600 A	19981110 Method of mounting electronic parts	29/841	Ahn, Eun Chul et al.
US 5662987 A	19970902 Multilayer printed wiring board and method of making same	428/209	Takubo, Chiaki et al.
US 5304392 A	19940419 Method of manufacturing printed wiring board	427/96	Hashimoto, Nobuaki
US 5268194 A	19931207 Method of packing filler into through-holes in a printed circuit board	427/97	Mizumoto, Shogo et al
US 5145691 A	19920908 Apparatus for packing filler into through-holes or the like in a printed circuit board	425/110	Matsumoto, Masuo
US 5090120 A	19920225 Process for forming solder lands in a printed wiring board manufacturing method	29/846	Kawakami, Shin et al.
US 4323593 A	19820406 Method of printing a spot pattern in a printed circuit board	427/97	Kawakami, Shin et al.
US 4024629 A	19770524 Fabrication techniques for multilayer ceramic modules	29/852	Matsumoto, Masuo
US 5087413 A	19920211 Conducting material and a method of fabricating thereof	419/9	Tsunashima, Eiichi
US 4919970 A	19900424 Solder deposition control	427/96	Lemonie, Jean Marie e
US 4908940 A	19900320 Method of manufacturing two-layer printed circuit sheet	29/852	Abe, Kenichiro
US 4383495 A	19830517 Apparatus for coating surfaces of a substrate	118/406	118/406 Hoebener, Karl G. et a
US 6060150 A	20000509 Sheet for a thermal conductive substrate, a method for manufacturing the same, a thermal conductive sul 28/209 Amano, Toshiaki et al	su428/209	Amano, Toshiaki et al.
US 5120384 A	19920609 Method of manufacturing multilayer laminate	156/242	156/242 Plichta, George J. et a